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A NEW SPECIES OF STONE CRICKET FROM ARKANSAS  
(ORTHOPTERA: TETTIGONIDAE; RHAPHIDOPHORINAE).

BY A. N. CAUDELL, *U. S. Bureau of Entomology.*

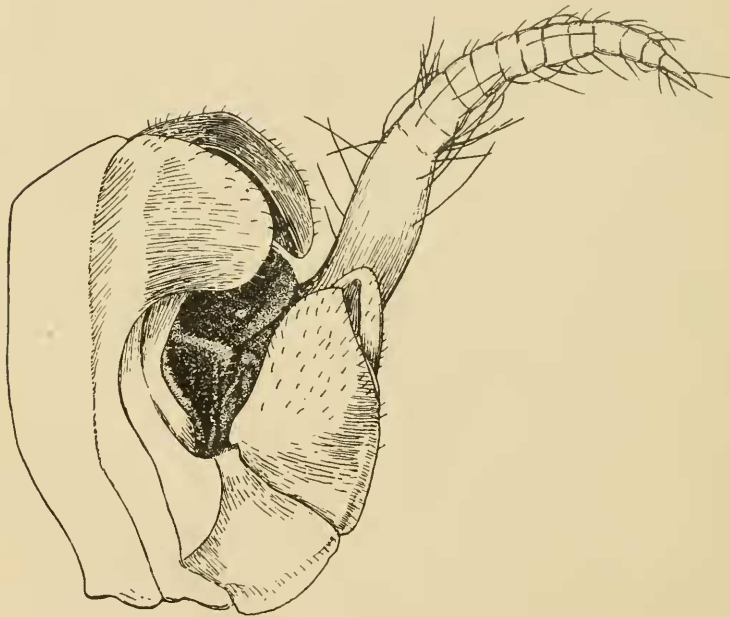
*Ceuthophilus marshalli*, new species.

*Male*.—Head yellow, smooth, the vertex very slightly tuberculously swollen; eyes black, small, about as long as broad, pointed below. Thorax smooth, yellow, with each section darker posteriorly; pronotum about as long as the meso- and metanotum together. Legs uniformly yellow, moderately slender; anterior femora a little longer than the pronotum, armed beneath on the anterior margin at about the apical fifth with a single large articulate spine; middle femora armed ventrally with three spines on the anterior margin, the largest situated about as the one on the fore femora, the other two smaller, the basal one situated a little beyond the middle, and on the posterior margin with one rather large genicular spine and one to three very small spines situated about as those on the outer margin;<sup>1</sup> posterior femora three times as long as the greatest width and tapering almost to the tip; ventral margins armed with short triangular teeth, those on the outer margin closer together, over thirty in number and extending to within about a fifth of the base, those of the inner margin smaller, about the same in number, situated a little further apart and extending to within a very short distance of the base; dorsal surface of these femora finely granulate, without acute points, or with one or two very minute ones; central sulcus broad for its entire length, narrowing slightly basally; anterior tibiae a little shorter than their corresponding femora, armed dorsally with sharp genicular spine on each side and beneath with three small spines on the anterior margin and two on the opposite margin, in addition to the larger apical pair; median tibiae about as long as their femora and armed as in the anterior ones with an additional pair of dorsal spines situated slightly distad of the middle; posterior tibiae subequal in length with their femora, straight, armed beneath with a pair of very minute apical spines and a subapical one situated on the median line, above with four pairs of spines, scarcely divergent, slightly slanting backwards, but little longer than

<sup>1</sup>In the ♂ holotype there is but one of these small spines on the left femur, situated about the middle, and two on the right femur, situated approximately opposite the one on the left side; in the adult ♂ paratype there are two on one femur and none on the other, and the allotype has this margin wholly unarmed except for the genicular spine; thus it appears rather certain that these spines when present will vary in number from one to three.

the tibial width and situated almost opposite each other and each pair separated by subequal distances, the basal pair slightly beyond the basal fifth and the apical pair at the apical fifth; in addition to the above noted spines there are the usual apical calcars, three on each side, the dorsal pair of about the same length as the adjacent pair of dorsal spines and indistinguishable from them in form; the median pair about twice as long as the upper, the inner one slightly the longer and about three fourths as long as the posterior metatarsus; the ventral calcars slightly shorter than the dorsal ones. Anterior and middle tarsi a little shorter than their tibiae and the posterior ones about one half as long as their corresponding tibiae; posterior metatarsus subequal in length with the other three combined; second segment distinctly, but less than twice, longer than deep, and fully twice as long as the third segment.

Abdomen brownish yellow, paler beneath, moderately tapering and with the dorsal surface smooth; eighth dorsal segment apically transverse, similar to the preceding one; ninth dorsal segment projecting conspicuously beyond the eighth and apically deeply notched, the lateral angles assuming a vertical position from a lateral view appearing as in Fig. Supraanal plate almost hidden in the holotype but in the ♂ paratype it is seen to be triangular and a little longer than broad; subgenital plate apically triangularly notched, the notch apically occupying the greater part of the width of the plate; cerci simple, slender, thickest part a little basad of the middle, the length about the same as the greatest width of the posterior femora.



*Ceuthophilus marshalli*, end of female abdomen with one cercus removed.

*Female*.—Coloration and structure as in the male except in the following features: The median femora are unarmed on the posterior ventral margin except for the genicular spine, though in some specimens this margin will very surely be found armed with from one to three small spinules as in the male; posterior femora armed beneath on both margins in a little more than the apical half with many very minute teeth, more numerous on the outer margin; middle tibiae with two medio-dorsal spines on the right tibia and one on the anterior margin only of the other one; ninth segment of abdomen inconspicuous, almost hidden beneath the eighth. Subgenital plate apically rounded or, in dried specimens, mesially broadly notched; ovipositor noticeably longer than the pronotum, the outer valves smooth and apically curved upwards and very sharply pointed, the inner valves apically very sharply pointed and decurved and with four ventral teeth, sharp and, especially the distal ones, very slender.

Measurements.—Pronotum, ♂, 4.5; ♀, 3.5 mm.; anterior femora, ♂, 5, ♀, 4.25 mm.; posterior femora, ♂, 10, ♀, 8 mm.; posterior tibia, ♂, 10.5, ♀, 9 mm.; ovipositor, 5 mm.; width, posterior femora at widest point, ♂, 3.3, ♀, 2.5 mm.

Holotype ♂, allotype ♀, paratypes A, adult ♂, B, C, D, and E, adult ♀ ♀, and F to K, immature males. All taken at the type locality by B. C. Marshall. All the adult material was taken in October, 1925, except one female, paratype C, which was taken the previous February. The nymphs were taken in February, March and October, 1925. All were sent pinned except paratypes D and E which were in spirits. Paratypes B and C appear as if they also had been preserved for a time in spirits as the colors seem somewhat faded.

*Types*.—Holotype, allotype and paratypes A, C, E, F, G and K in the National Museum (Cat. No. 28934, U. S. N. M.); the rest of the material returned to the collector.

*Type locality*.—Imboden, Arkansas.

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#### SOME NEW PORTO RICAN SCALE PARASITES (HYMENOPTERA: ENCYRTIDAE).

BY H. L. DOZIER,<sup>1</sup> *Delaware Agricultural Experiment Station.*

The writer while conducting some scale and whitefly parasite studies in Porto Rico, during 1925, reared a large number of very interesting forms, many of which proved to be new to science. Two of the species described in this paper are primary parasites of the Pustule Scale, which is a very destructive pest in the West Indies. This scale occurs in Florida, where it disfigures the oleander. It would be very interesting to determine whether or not these two parasites also occur there. Thanks are due Mr. P. H. Timberlake, who kindly confirmed the

<sup>1</sup>Formerly Chief Entomologist, Insular Expt. Station, Rio Piedras, Porto Rico.